

Appl. No. 10/814,408  
Atty. Docket: 2002B139/2  
Amendment dated December 21, 2006  
Reply to Office Action dated October 3, 2006

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### **REMARKS/ARGUMENTS**

#### **Claim Status and Request for Reconsideration**

Reconsideration of this application is requested. The claims presented for reconsideration are claims 24 and 30-33, as amended. Claims 24 and 33 have been amended to clarify the structure-function relationship of the regenerator catalyst circulation control valve means, as well as the structure-function relationship of the catalyst circulation control valve means. Although these claimed features were previously set forth in means-plus-function language, the term "means for" was not explicitly used. "While traditional 'means for' or 'step for' language does not automatically make an element a means-(or step-) plus-function element, conversely, lack of such language does not prevent a limitation from being construed as a means-(or step-) plus-function limitation." *See, e.g.,* M.P.E.P. § 2181 (citations omitted). An example of claim language that does not include the traditional "means for" language is "a jet driving device so constructed and located on the rotor as to drive the rotor..." *Id.* This amendment merely clarifies the structure-function relationship of the regenerator catalyst circulation control valve means, as well as the structure-function relationship of the catalyst circulation control valve means in traditional "means for" language. Accordingly, no new matter has been entered, and no new issues have been presented, by the claim amendments presented herein.

#### **Claim Rejections - 35 U.S.C § 103**

Claims 24 and 30-33 were rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 2,892,773 to Hirsch *et al.* (hereinafter "Hirsch"), in view of U.S. Patent No. 4,092,722 to Hofferber *et al.* (hereinafter "Hofferber"), and further in view of U.S. Patent No. 3,213,014 to Atkinson *et al.* (hereinafter "Atkinson"). Applicants respectfully traverse this rejection for the following reasons.

It was noted in the Office Action that Hirsch was silent with regard to: 1) the regenerator control valve being manipulated as a function of the riser reactor temperature; and 2) the catalyst circulation control valve being manipulated as a function of the difference in pressure between an upper portion of the riser reactor and a lower portion of the riser reactor. Nevertheless, it was reasoned that such valve could be manipulated such as by hand, and independent claim 24 was

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considered obvious over Hirsch. The functions of the claimed valves were not given weight to the extent each claimed limitation was considered to have been "merely recited as a process limitation or intended use." See the most recent Office Action at page 7.

To dismiss functional limitations in a means-plus-function type claim is improper. A proper analysis of such claims is outlined in M.P.E.P. § 2182 and follows the procedure explained by the Federal Circuit in *Golight Inc. v. Wal-Mart Stores Inc.*, 355 F.3d 1327, 1333-34, 69 USPQ2d 1481, 1486 (Fed. Cir. 2004):

The first step in construing a means-plus-function claim limitation is to define the particular function of the claim limitation. *Budde v. Harley-Davidson, Inc.*, 250 F.3d 1369, 1376 [58 USPQ2d 1801] (Fed. Cir. 2001). "The court must construe the function of a means-plus-function limitation to include the limitations contained in the claim language, and only those limitations." *Cardiac Pacemakers, Inc. v. St. Jude Med., Inc.*, 296 F.3d 1106, 1113 [63 USPQ2d 1725] (Fed. Cir. 2002). . . . The next step in construing a means-plus-function claim limitation is to look to the specification and identify the corresponding structure for that function. "Under this second step, 'structure disclosed in the specification is "corresponding" structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim.'" *Med. Instrumentation & Diagnostics Corp. v. Elekta AB*, 344 F.3d 1205, 1210 [ 68 USPQ2d 1263] (Fed. Cir. 2003) (quoting *B. Braun Med. Inc. v. Abbott Labs.*, 124 F.3d 1419, 1424 [43 USPQ2d 1896] (Fed. Cir. 1997)).

Applying a proper analysis of Applicants' claimed regenerator catalyst circulation control valve means for controlling the passage of catalyst from said regenerated catalyst outlet to said lift gas riser, said means being manipulated as a function of riser reactor temperature, would entail reviewing the structure disclosed in the specification (including Figure 1) that performs the claimed function against the structure disclosed in Hirsch. Hirsch discloses no structure corresponding to Applicants' structure. Likewise, a proper analysis of the claimed catalyst circulation control valve means for controlling circulation of catalyst from said disengaging vessel to said riser reactor, said means being manipulated as a function of the difference in pressure between an upper portion of said riser reactor and a lower portion of said riser reactor,

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would entail reviewing the structure disclosed in the specification that performs the claimed function against the structure disclosed in Hirsch. Again, Hirsch discloses no corresponding structure.

Applicants' claimed reactor bed apparatus also includes "a second catalyst transport line extending downwardly from a regenerated catalyst outlet on the regenerator and intersecting with a lift gas riser, said lift gas riser having an upper outlet at said disengaging vessel and a lower lift gas inlet." The Hirsch apparatus does not have such an arrangement. Instead, Hirsch has a lift gas riser having a *lower* outlet at said disengaging vessel. See Hirsch's disclosed regenerated catalyst transfer line 58, which has an outlet at the lower portion of the hopper 16. This is an inverse relationship from that which Applicants claim.

The secondary references, Hofferber and Atkinson, were cited for the general disclosure that temperature and pressure control systems are known for use in fluid bed reactors. While Applicants do not dispute that general assertion, Applicants cannot find, and the Examiner has not offered anything to suggest that such a general disclosure would motivate one of ordinary skill in the art to modify Hirsch's control valves to include the structure claimed by Applicants. Even if some justification could somehow be inferred, both references still fail to disclose or suggest any control valve or structure that would control passage of regenerated catalyst to a lift gas riser having an upper outlet at the disengaging vessel. In fact, no combination of cited prior art references of record shows any regenerator transfer line that connects to an upper portion of a disengaging vessel. Accordingly, Hirsch, Hofferber, and Atkinson, taken alone or in combination, fail to suggest Applicants' claimed invention.

For any of the foregoing reasons, Applicants respectfully submit that an obviousness rejection over the prior art of record cannot be maintained. Thus, Applicants respectfully request that the obviousness rejection be reconsidered and withdrawn.

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**CONCLUSION**


Having demonstrated that the cited references fail to disclose or suggest the invention as claimed, and all other formal issues having now been fully addressed, this application is believed to be in condition for allowance. Accordingly, Applicants request early and favorable reconsideration in the form of a Notice of Allowance.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated, since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response. Please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1712 (Docket #: 2002B139/2).

Respectfully submitted,

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